

WHAT IS CLAIMED IS:

1. A magnetic head comprising:

a slider; and

a magnetic element disposed on an end face of the slider in the trailing side for writing and/or reading, wherein a plurality of ABS faces are formed on a surface of the slider facing a recording medium so as to rise toward the recording medium and be at the same level as each other, the plurality of ABS faces serving to generate positive pressure, and

wherein a surface facing the element is formed on the ABS face in the trailing side so as to further rise toward the recording medium, and a gap portion of the magnetic element is located on the surface facing the element.

2. A magnetic head according to Claim 1, wherein when the height from the surface facing the recording medium to the trailing ABS face is h_1 and the height from the trailing ABS face to the surface facing the element is h_2 , the ratio h_2/h_1 is at least 0.4% and 2.5% at most.

3. A magnetic head according to Claim 1, wherein between a leading edge of the trailing ABS face and the surface facing the recording medium, a step face having a height lower by one step than that of the ABS face is formed.

4. A magnetic head according to Claim 1, wherein a leading end face of the trailing ABS face and a leading end face of the surface facing the element are inclined surfaces which gradually rise from the surface facing the recording medium toward the surface facing the element.

5. A magnetic head according to Claim 1, wherein a side face of the surface facing the element is provided with an inclined surface formed thereon which starts from a trailing edge of the surface facing the element and gradually approaches a side face of the slider when proceeding toward the leading side, and wherein a gap portion of the magnetic element is located inside the inclined surface.

6. A magnetic head according to Claim 1, wherein both side faces of the surface facing the element and the trailing ABS face are provided with respective inclined surfaces formed thereon which start from respective trailing edges of the surface facing the element and the trailing ABS face and gradually approach a side face of the slider when proceeding toward the leading side, and wherein a gap portion of the magnetic element is located inside the inclined surfaces.

7. A magnetic head according to Claim 6, wherein the inclined surface of the surface facing the element and the

inclined surface of the trailing ABS face are continuous.

8. A magnetic head according to Claim 5, wherein two of the inclined surfaces are provided so as to have an apex formed at the trailing edge and gradually approach both lateral side-faces of the slider when proceeding toward the leading-side, respectively, and wherein a gap portion of the magnetic element is located at a position sandwiched between the two inclined surfaces.

9. A magnetic head according to Claim 8, wherein an inclination θ_1 of the inclined surface relative to the width direction of the slider is at least 20° and 60° at most.

10. A magnetic head according to Claim 8, wherein the apex has a curved surface.

11. A magnetic head according to Claim 1, wherein the surface facing the recording medium extends between the ABS faces and both side faces of the slider.

12. A magnetic head comprising:

a slider; and

a magnetic element disposed on an end face of the slider in the trailing side for writing and/or reading,

wherein a surface facing an element is formed in the trailing side to be raised from a surface of the slider

facing a recording medium, side faces of the surface facing the element having inclined surfaces starting from the trailing side and gradually approaching side faces of the slider when proceeding toward the leading-side,

wherein the surface facing the recording medium extends between both the side faces of the slider, and

wherein a gap portion of the magnetic element is located on the surface facing the element and between the inclined surfaces.

13. A magnetic head according to Claim 12, wherein a surface other than the surface facing the element is formed so as to rise from the surface facing the recording medium, the surface facing the element being closest to the recording medium.

14. A magnetic head apparatus comprising:

a magnetic head according to Claim 1; and

a supporting member for elastically supporting the magnetic head from the side opposite to the surface facing the recording medium.

15. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, when the height from the surface facing the recording medium to the ABS face is h_1 and the height from the ABS face to the surface facing the element is h_2 , the ratio h_2/h_1 is at least 0.4% and 2.5% at

most.

16. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, between a leading edge of the trailing ABS face and the surface facing the recording medium, a step face is formed which is lower by one step than the trailing ABS face.

17. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, a leading end face of the trailing ABS face and a leading end face of the surface facing the element are inclined surfaces which gradually rise from the surface facing the recording medium toward the surface facing the element.

18. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, side faces of the surface facing the element are provided with inclined surfaces formed thereon which start from a trailing edge of the surface facing the element and gradually approach side faces of the slider when proceeding toward the leading-side, and a gap portion of the magnetic element is located between the inclined surfaces.

19. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, both side faces of the surface facing the element and side faces of the trailing ABS face

are provided with inclined surfaces formed thereon which start from trailing edges of the surface facing the element and the trailing ABS face and gradually approach side faces of the slider when proceeding toward the leading side, and a gap portion of the magnetic element is located between the inclined surfaces.

20. A magnetic head apparatus according to Claim 19, wherein in the magnetic head, the inclined surface of the surface facing the element and the inclined surface of the trailing ABS face are continuous.

21. A magnetic head apparatus according to Claim 18, wherein in the magnetic head, two of the inclined surfaces are provided so as to have an apex formed at a trailing edge and gradually approach both lateral side-faces of the slider when proceeding toward the leading-side, respectively, and wherein a gap portion of the magnetic element is located at a position sandwiched between the two inclined surfaces.

22. A magnetic head apparatus according to Claim 21, wherein in the magnetic head, an inclination θ_1 of the inclined surface relative to the width direction of the slider is at least 20° and 60° at most.

23. A magnetic head apparatus according to Claim 21, wherein in the magnetic head, the apex has a curved surface.

24. A magnetic head apparatus according to Claim 14, wherein in the magnetic head, the surface facing the recording medium extends between the ABS faces and both side faces of the slider.

25. A magnetic head apparatus comprising:
a magnetic head according to Claim 12; and
a supporting member for elastically supporting the magnetic head from the side opposite to the surface facing the recording medium.

26. A magnetic head apparatus according to Claim 25, wherein in the magnetic head, a surface other than the surface facing the element is formed so as to rise from the surface facing the recording medium, the surface facing the element being closest to the recording medium.